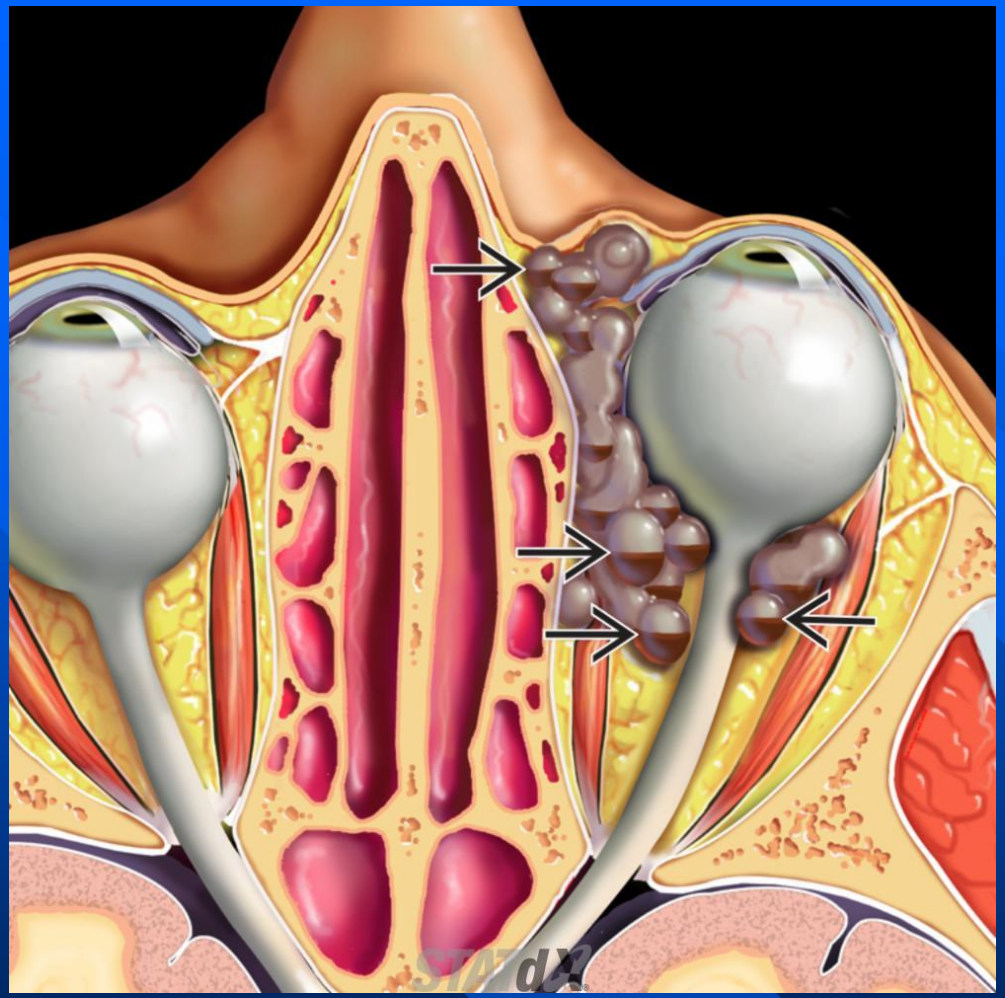
Orbital Lymphatic Malformation

- Congenital vascular malformation with variable lymphatic and venous vascular elements.
- Mass effect with proptosis in pediatric patient
- May rapidly ↑ in size due to acute hemorrhage
- Conservative therapy preferred due to surgical risk
- Percutaneous sclerotherapy for suitable lesions
- Surgical resection difficult, recurrence common
- Outdated terms: Lymphangioma, cystic hygroma
- Younger patients: **Infants to young adults**
- 40% present by age 6; 60% present by age 16

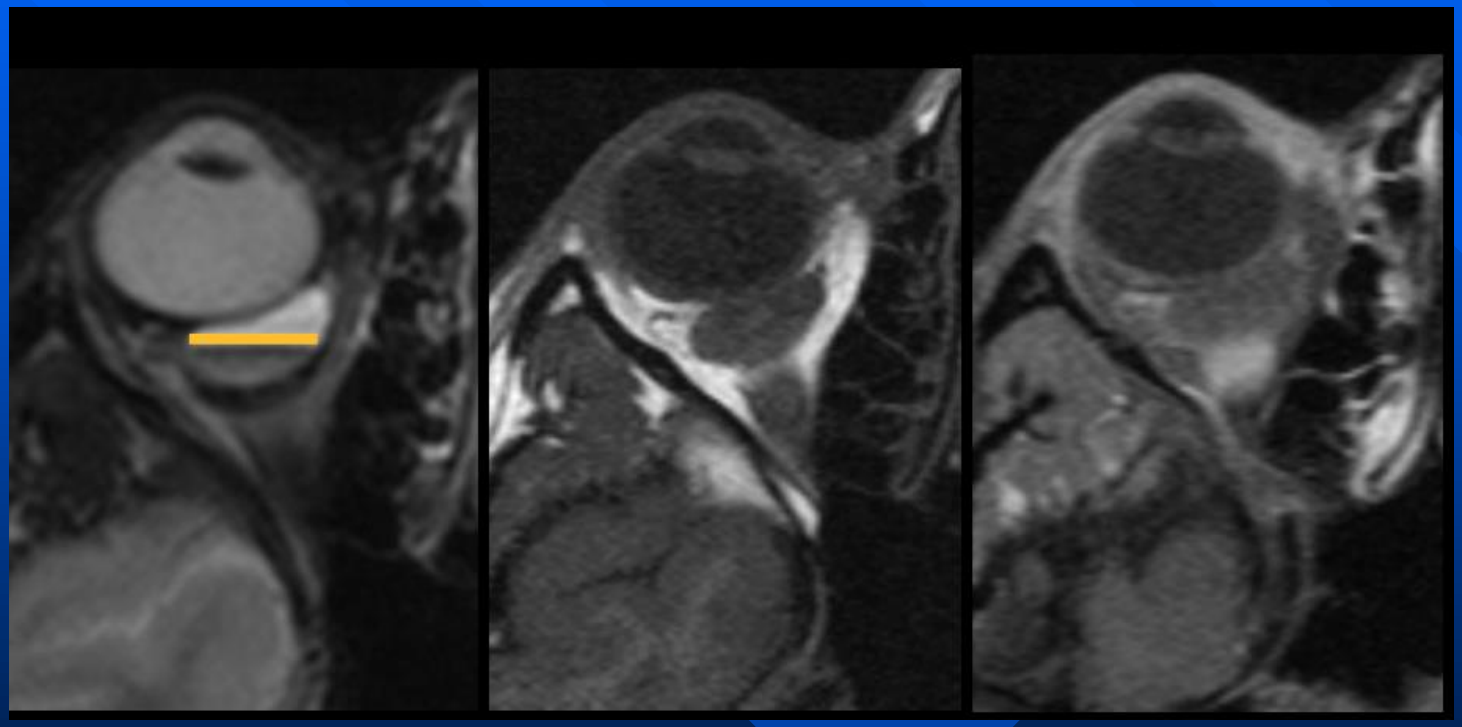
Imaging

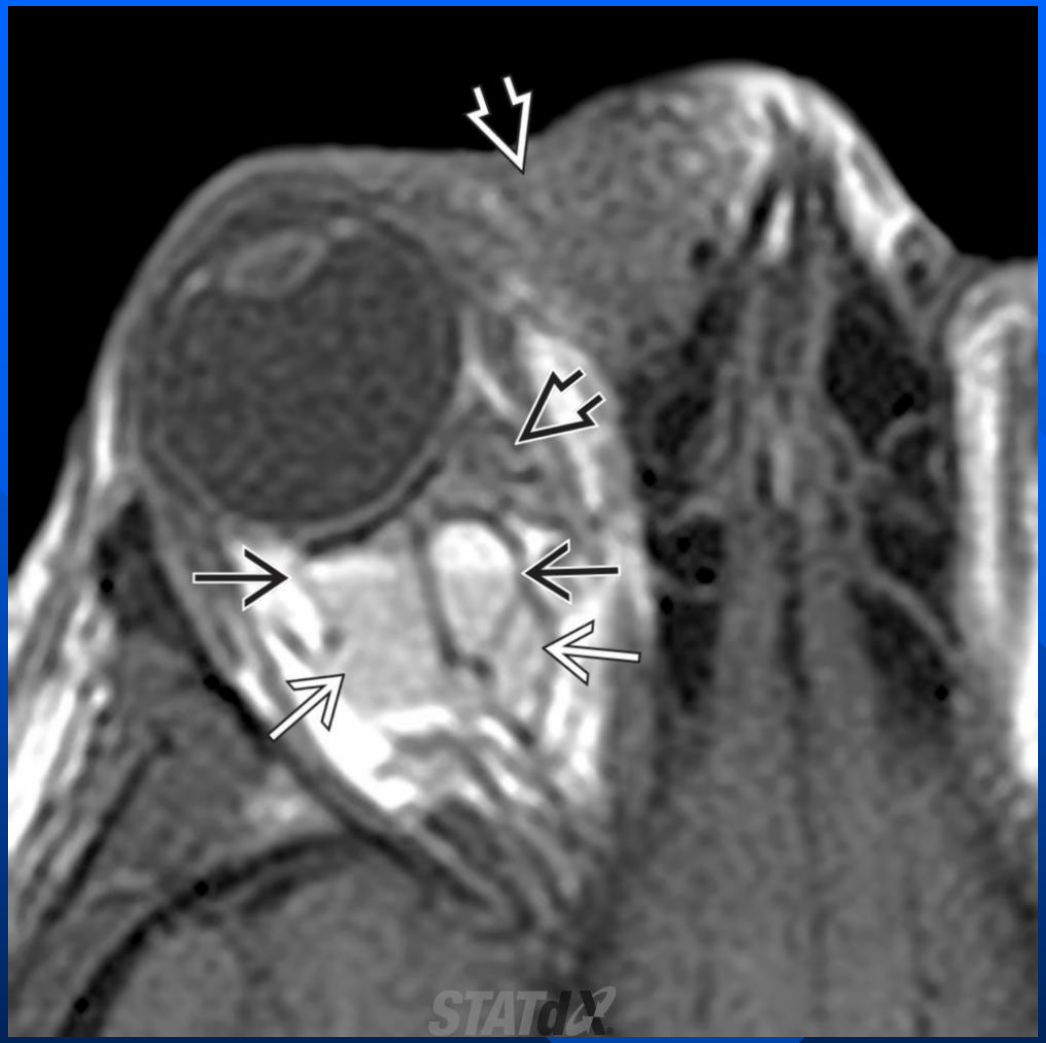
- Poorly marginated, lobulated, transspatial mass
- Multiloculated cystic features with fluid-fluid levels, blood products, and variable irregular enhancement
- Variants: Superficial vs. deep, macrocystic vs. microcystic
- CT: Irregular cystic hypodense mass with mixed hyperdense blood products
- MR: Variable signal resulting from mixed age hemorrhagic, lymphatic, or proteinaceous fluid
- Variable enhancement, typically at margins, more pronounced if prominent venous components
- US: Hypoechoic with heterogeneous internal echoes
- Best imaging tool
  - Dedicated enhanced orbital MR with fat suppression



Axial graphic depicts typical features of orbital lymphatic malformation, including transspatial extension, and characteristic fluid-fluid levels within loculations (black solid arrow).

Lymphangioma





Axial T1-weighted MR shows an infiltrative, transspatial mass. The posterior intraconal component (white solid arrow) demonstrates fluid-blood levels (black solid arrow) within macrocystic loculations. The preseptal (white open arrow) and anterior intraorbital (black open arrow) components appear more homogeneously hypointense, suggesting microcystic or venous elements.